

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-9 (Cancelled).

Claim 10 (Original): In a metropolitan area network, a method for implementing weighted fair flow control on the network, the method comprising the steps of:

- a) accepting a plurality of local input flows at each of a plurality of MPS for transport across a communications channel;
- b) transporting data among the MPS via the communications channel asynchronously, wherein the plurality of MPS include at least one upstream MPS and one downstream MPS;
- c) for each MPS:
 - c1) assigning a QoS to each local input flow;
 - c2) allocating a portion of insertion traffic bandwidth of the MPS to each local input flow in accordance with the QoS to implement weighted bandwidth allocation;
 - c3) inserting the insertion traffic of the MPS onto the communications channel using an available opening in the communications channel;
 - c4) if the insertion traffic needs to be reduced, reducing the allocation to those local input flows having a lower QoS before reducing the allocation to those local input flows having a higher QoS; and
- d) if the downstream MPS experiences congestion, throttling the insertion traffic of the upstream MPS to implement fair bandwidth allocation.

Claim 11 (Original): The method of Claim 10 wherein the QoS includes at least a first level and a second level, the first level having a higher priority than the second level.

Claim 12 (Original): The method of Claim 10 wherein the communications channel is an ethernet communications channel.

Claim 13 (Original): The method of Claim 12 wherein the communications channel is a 10 gigabit ethernet communications channel.

Claim 14 (Original): The method of Claim 10 wherein the metropolitan area network is a ring topology metropolitan area network.

Claim 15 (Original): The method of Claim 10 wherein transit traffic on the communications channel is given strict priority with respect to insertion traffic from each MPS.

Claim 16 (Original): The method of Claim 10 further including the step of:
minimizing jitter for higher QoS local input flows by reserving a portion of the insertion traffic of each MPS for the higher QoS local input flow.

Claims 17-25 (Cancelled).